

Appl. No.: 10/631,907  
Amdt. dated 05/12/2006  
Reply to Office Action of 03/14/2006

REMARKS/ARGUMENTS

In the final Office Action dated March 14, 2006, Claims 19, 21, 30, 31, 33-46 are pending. Claims 19, 30, 31, and 33-46 are rejected under 35 U.S.C. § 112, first paragraph. Claims 19, 30, 31, 38, 39, 41, and 42 are rejected under 35 U.S.C. § 102(b) as being anticipated by JP 10195567A ("JP '567"). The remaining Claims 21, 33-37, 40, 43-46 are rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '567 in view of U.S. Patent No. 4,159,666 to Briles.

Applicant respectfully requests reconsideration in light of the amendments and the following remarks.

Claims 19, 21, 30, 31, and 33-37 are cancelled above. The only remaining independent claim is Claim 38. Regarding the rejection of Claim 38 under 35 § 112, first paragraph, the text of the Office Action specifically states that this rejection has been withdrawn in light of the remarks provided in Applicant's last response. Accordingly, Applicant submits that Claim 38 stands rejected solely on the basis of being anticipated by JP '567.

Regarding the rejection of Claim 38 under § 102(b), the Office Action states:

In regards to claim 38, the material not having the grain size of 5 micrometers or less is such a small percentage of the overall volume (38%) the structure would continue to "consist essentially of" the grain size of 5 micrometers also, the small amount of material which does not fall within the claimed range is "about" within the range.

Office Action, page 3 (emphasis in original).

First, Applicant disagrees with the above characterization that "the material not having the grain size of 5 micrometers or less is such a small percentage of the overall volume (38%) the structure would continue to "consist essentially of" the grain size of 5 micrometers." Applicant has previously explained that, given the significance of the grain size to the formability of the rivets of the present invention, a composite material that has a volume of as much as 38% of material outside the claimed range cannot be considered to "consist essentially of" the claimed material.

In response to Applicant's prior remarks, the Office Action further states:

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[T]he examiner maintains that even at 38% other material Japan '567 continues to meet the limitation as to "consist essentially of" a grain size of 5 microns since the applicant has not shown that it materially effects the basic and novel characteristics of the invention. The phrase "consisting essentially of" limits the claim to the specified material "and those that do not materially affect the basic and novel characteristic(s)". *In re Herz*, 537 F.2d 549, 551-52. 190 USPQ 461. 463 (CCPA 1976) (emphasis in original) and applicant has the burden of showing that the introduction of additional components would materially change the characteristics of applicants' invention. *In re Lajarte*, 337 F.2d 870. 143 USPQ 256 (CCPA 1964). The mere statement that 38% of the volume of material is outside of the claimed range is insufficient to show that it changes the material characteristics.

Office Action, pages 5-6.

Even if the phrase "consisting essentially of" limits the claim to the specified material and those that do not materially affect the basic and novel characteristics, that feature alone distinguishes JP '567 because JP '567 includes materials that affect the basic and novel characteristics described in the present application, i.e., the characteristics resulting from the claimed refined grain structure such as resistance to the formation and propagation of cracks and improved formability to resist necking, cracking, or tearing during manufacture and installation of the rivets. See page 9, lines 9-24.

Moreover, Applicant asserts that no further showing or evidence of this distinction is required. In this regard, Applicant disagrees with the Examiner's reliance on *In re Lajarte*, 337 F.2d 870 as requiring any further showing that the introduction of additional components would materially change the characteristics of the Applicant's invention. *In re Lajarte* concerned an application for a glass suitable for use as an electrical insulator and having, *inter alia*, high resistance to perforation by high-voltage electric current. The patent applicant further "alleges that a glass having all of the desired properties can be obtained by making a glass having the composition set forth in the claims." *In re Lajarte* at 872. The Court of Customs and Patent Appeals stated that "Claim 11 which recites 'consisting essentially' the named ingredients does not exclude small amounts of other materials which do not change the essential character of the

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composition." *Id.* at 873. Further, the court stated that "here appellant has the burden of showing the basic or novel characteristics of his insulting glass" and determined that "[h]e has met this burden by pointing out in his specification and claims the great increase in resistance to perforation resulting from his composition." *Id.* at 874. Indeed, the court considered the contentions of the Board of Appeals and solicitor "that appellant had furnished no evidence that a critical difference in appellant's emphasized characteristics would result from the introduction of small amounts of [the materials used in the cited prior art reference]," and specifically declined to require further evidence from the appellant. According to the court, "Appellant, in showing that his glass has basic and novel properties (at least as far as the record is concerned), would appear to have met his burden." Further, the court held that "[a]dmitedly, the differences [between the appellant's glass and the glass of the prior art reference] are small, but [the prior art reference] is devoid of any suggestion of a glass embodying these differences. The examiner has failed to suggest any reason for omitting carbon and sulfur from the [prior art] glass. If one were making a colorless glass free of carbon and sulfur, there would be little reason for using the [prior art] formula since it was primarily designed to enhance color stability." *Id.* at 875. Accordingly, the *Lajarte* court reversed the decision of the Board of Appeals.

Just as the applicant in *In re Lajarte* alleged that his claimed glass composition provided the desired properties such as resistance to perforation by high-voltage electric current, Applicant of the present invention has similarly described that desired properties such as resistance to cracks and improved formability are achieved by the presently claimed invention. Further, similar to the applicant in *In re Lajarte*, the Applicant of the present invention has met the burden of showing the basic or novel characteristics of the invention by pointing out the improvements in the material properties that result from the claimed invention. Also, in the present application, Applicant is not required to provide further evidence, such as by duplicating the JP '567 material to compare its properties to those of the claimed invention.

Further, and again similar to *In re Lajarte*, JP '567 is devoid of any suggestion of a rivet that embodies the differences identified above. The Office Action does not suggest any reason for omitting any of the three components of the composite material disclosed by JP '567 that have grain structures outside the recited range. By reasoning parallel to that of the *In re Lajarte*

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court, if one were making a rivet having high strength and formability, there would be little reason for using the composite material of JP '567 since it was primarily designed to provide self-lubricating characteristics. Nor would there be any reason to omit the three components having grain structures outside the recited range, given the teaching of JP '567 for including these materials in particular ranges of amounts for attaining the stated objectives of the reference.

Applicant also disagrees with the Examiner's contention that "the small amount of material which does not fall within the claimed range is 'about' within the range." Claim 38 recites a grain size between about 3 microns and 5 microns. As previously described, JP '567 states that the mean grain sizes of the dispersed aluminum oxide particles and aluminum carbide particles are together not more than 100 nm, and the mean grain size of the boride particles are not more than 1  $\mu$ m. Materials of such grain sizes are not "between about 3 microns and 5 microns" as claimed. Indeed, even at the largest values disclosed by JP '567, the mean grain size of the boride particles is no more than 1/3 of the size of the smallest value in the claimed range, and the mean grain size of the aluminum oxide and aluminum carbide particles is no more than 1/30 of the size of the smallest value in the claimed range.

Finally, Applicant respectfully disagrees with the Examiner's assertion that, because the term "comprising" is used in the preamble of the claim, "material of the shank which applicant argues as not [ ]having the grain size between about 3 microns and 5 microns could alternatively be considered part of the rivet which [i]s not 'comprising' the defined grain size." Office Action, page 6. Here, it appears that the Examiner is asserting that the "open" claim terminology in the preamble somehow affects the "closed" terminology used in the body of the claim. Claim 38 recites "A rivet comprising . . . a shank having a head . . . wherein said shank and said head consist essentially of a grain structure having a grain size between about 3 microns and 5 microns." Thus, the use of the term "comprises" in the preamble indicates that the rivet could include elements other than the shank and the head, for example, as second head; however, the use of the term "consist essentially of" in the body of the claim does limit that which the shank and head can include. In other words, while the claim does not restrict the addition of additional elements to the rivet, the claim does restrict the addition of additional materials to the shank and head. As set forth in Claim 38, the addition of elements or materials to the rivet is irrelevant,

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provided that the rivet includes at least one "shank having a head" and provided that that shank and head "consist essentially of" the recited grain structure. Neither JP '567 nor the other references teach or suggest a shank having a head, wherein the shank and head "consist essentially of" the recited grain structure. Accordingly, Applicant respectfully submits that Claim 38 is allowable. The dependent claims are also allowable for the same reasons, and as set forth in the previous response.

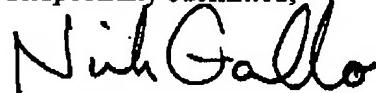
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### CONCLUSIONS

In view of the remarks presented above, Applicant submits that Claims 38-46 are allowable and the present application is in condition for allowance. As such, the issuance of a Notice of Allowance is therefore respectfully requested. In order to expedite the examination of the present application, the Examiner is encouraged to contact Applicant's undersigned attorney in order to resolve any remaining issues.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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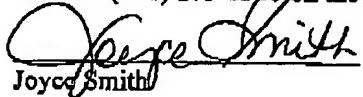
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